

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

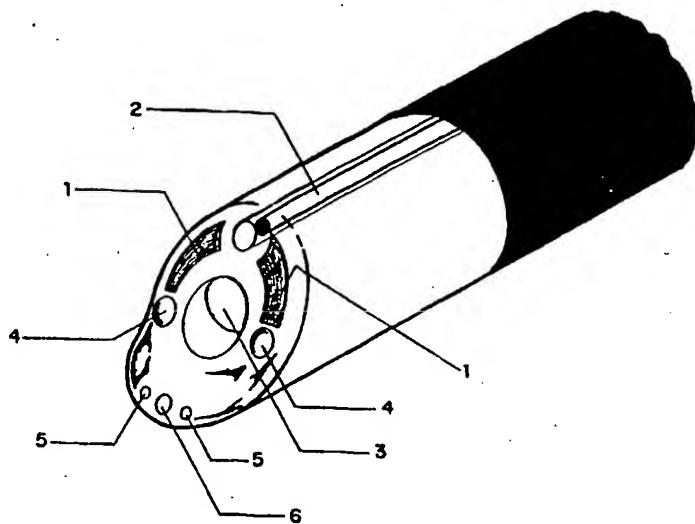


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61B 17/02, 17/32, 17/34	A1	(11) International Publication Number: WO 95/10982 (43) International Publication Date: 27 April 1995 (27.04.95)
(21) International Application Number: PCT/BR93/00036		(81) Designated States: DE, JP, US.
(22) International Filing Date: 20 October 1993 (20.10.93)		Published <i>With international search report.</i>
(71)(72) Applicant and Inventor: CORRÊA, Marco, Aurélio, Moura de Faria [BR/BR]; Rua Sinimbú No. 117, Apt. 201, 91470-470-Porto Alegre, RS (BR).		

(54) Title: SURGICAL INSTRUMENT TO PERFORM SUBCUTANEOUS ENDOSCOPIC SURGERY

BEST AVAILABLE COPY



(57) Abstract

This invention is a medical surgical instrument to perform endoscopic plastic surgery without use of insufflatable gas techniques, avoiding the risk of gas embolization. This instrument has as a working head a blunt/sharp dissector with an optical system (4), illumination source (1), irrigation source (6), aspiration source (5), instrumentation channels (3) for cutting cauterization and suturing instruments, and channels for elevators/retractors (2) that can create a workspace at the subcutaneous tissue without use of gas.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

- 1 -

SURGICAL INSTRUMENT TO PERFORM SUBCUTANEOUS ENDOSCOPIC SURGERY

This invent is a surgical instrument to perform endoscopic surgery in the subcutaneous tissue. It has a workhead that can perform the funções of visualization, irrigation, aspiracion, cutting, cauterization, 05 instrumentation in the subcutaneous tissue, and can criate its own work space without use of insuflate gas.

The Endoscopic Surgery Technics has been used in General Surgery, Ginecology, Ortopedics, and its advantages over the tradicional surgical technics has been shwoed in these 10 diferents fields.

Endoscopic Surgery Technique allow a more confortable position to the surgeon; the amplification of images seen in the video monitor make it more safe; delicate procedures can be performed trought small incisions, all specific 15 advantages so diserable in Cosmetic Plastic Surgery.

Videoendoscopic technique has been developed in inner cavities and anatomical spaces that cam bee expanded by gases (peritoneal and pleural cavities) because a work space is required between the optical sisten and the 20 tissues for the purposes of ilumunation, capture of images and execution of procedures.

Working at the subcutaneous tissue the surgeon necessary must cut a many vessels In this way the traditional

- 2 -

Endoscopic Gas Infuflator Methods are a dangerous step due to the a risk of gas embolization, its dispersion and toxicity.

This device is a medical surgical instrument to bee used
05 in Endoscopic Plastic Surgery, the "so called"
SUBCUTANEOUSTOMOSCOPE that allow to work at the
subcutaneous tissue through small incision without use of
gases because it can criate its own work space avoiting the
risk of gas embolous.

10 The caracteristic of this instrument are a "workhead"
like a nave or capsul that can perform a blump/sharp
dissecccion at the subcutaneous tissue under monitor view,
and can perform Subcutaneous Endoscopic Surgery through
accesory canals providing instrumentation source, ligh
15 source, cut/cauterization, aspiration sources. It have
separators/elevators and can cried its own workspace,
avoiting the use of insuflate gas technics and its riks.

Diferents prototypes were built and experimental surgery
has been done on d ogs, pigs, and cadaveres, and the
20 viability of the method has been proved; we can perform
axilary nodes and braquial plexus endoscopic exploration,
the mapping out of a cutaneous flap through endoscopic plus
transilumination view, flaps pedicules diseccions,etc.

We have used this instrument to perform Aesthetic Plastic
25 Surgery through small incisions and I have developed and
describeb endoscopic technics to Abdomenoplasty and
Mammoplasty

- 3 -

The "so called" Subcutaneoustomosope have the following advantages:

- a) Avoid the risk of gas embolization and toxicity of the Videolaparoscopic technique;
- 05 b) Provide dissection and visualization simultaneously
- c) bring to the Plastic Surgery the advantages of a minimal invasive surgery such as: less tissue trauma , decreased rates of infection, less hospitalization time, and a small scars so desirable when dealing with Cosmetic
- 10 Surgery.

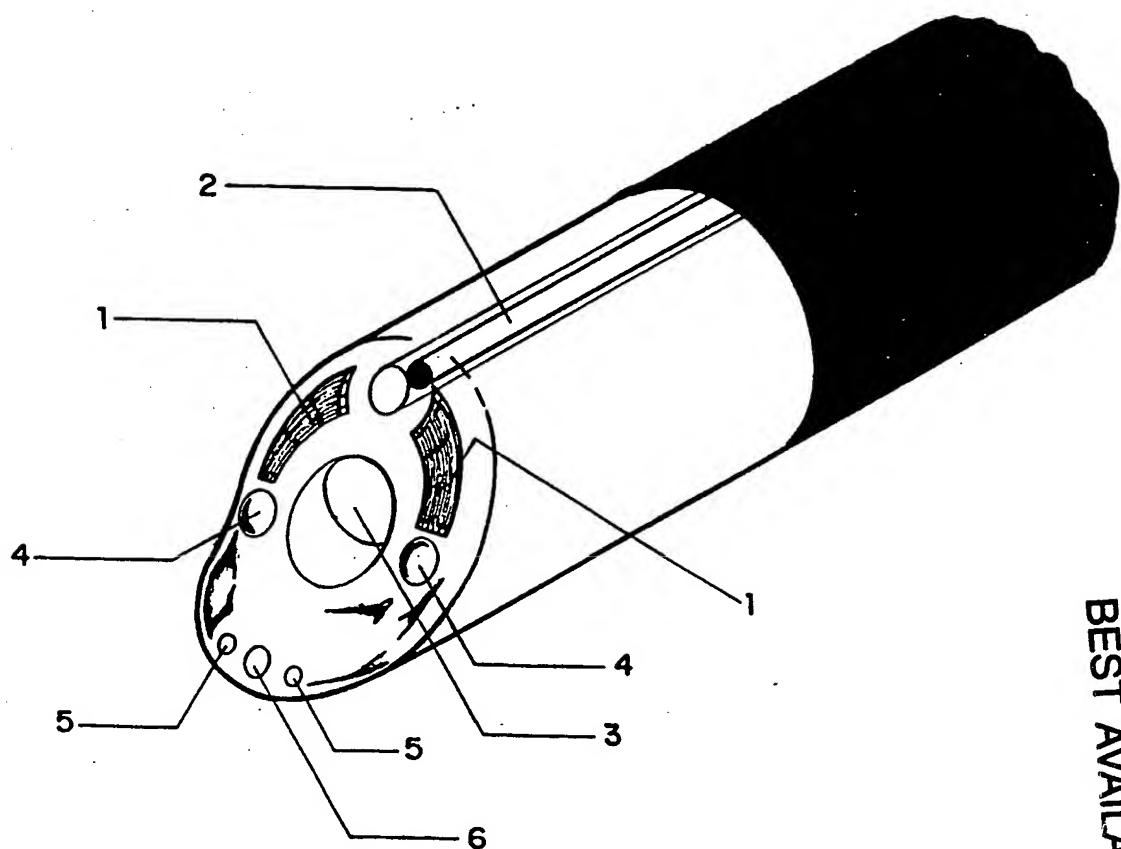
In order to help the full understanding of the conception of this instrument, it will be explained and presented by same simple designs.

- 4 -

CLAIM

1- Medical Surgical Instrument to be used in Endoscopic Plastic Surgery without use of insuflatable gas avoiding the risk of gas embolization characterized by to bee a
5- blump/sharp dissector workhead (fig.) provided of a optical system (4), illumination source(1), irrigation source(6), aspiration source(5), a instrumentation channel to cut/cauterization/suture(3), and elevators/separators to criate a subcutaneous workspace withouth use of gas.

1/1



BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No

PCT/BR 93/00036

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 A61B17/02 A61B17/32 A61B17/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 6 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO,A,92 12680 (LASERSCOPE) 6 August 1992 see page 14, paragraph 2 - page 15, paragraph 3; figures 4,7-9 ---	1
A	WO,A,87 01276 (SONOMED) 12 March 1987 see page 25, paragraph 1; figures 4,6,7 ---	1
A	US,A,5 245 987 (REDMOND) 21 September 1993 see abstract; figures 1,6 ---	1
A	DE,C,35 04 292 (WOLF) 24 July 1986 see figure 4 ---	1
A	US,A,4 760 840 (FOURNIER) 2 August 1988 see figures 2,5,9 -----	1

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

13 June 1994

04.07.94

Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentiaan 2
 NL - 2280 HV Rijswijk
 Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl,
 Fax (+ 31-70) 340-3016

Authorized officer

Barton, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/BR 93/00036

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO-A-9212680	06-08-92	AU-A-	1418492	27-08-92
WO-A-8701276	12-03-87	US-A- CA-A- CA-A- DE-D- EP-A- JP-T- US-A- US-A-	4750902 1304639 1318000 3689308 0233940 63500850 4750488 4922902	14-06-88 07-07-92 18-05-93 23-12-93 02-09-87 31-03-88 14-06-88 08-05-90
US-A-5245987	21-09-93	WO-A-	9403114	17-02-94
DE-C-3504292	24-07-86	FR-A- GB-A,B US-A-	2577132 2170715 4686965	14-08-86 13-08-86 18-08-87
US-A-4760840	02-08-88	NONE		